Momentum Cloud - AI-Powered Digital Human Customer Service

computer technologies

Your Solution Partner

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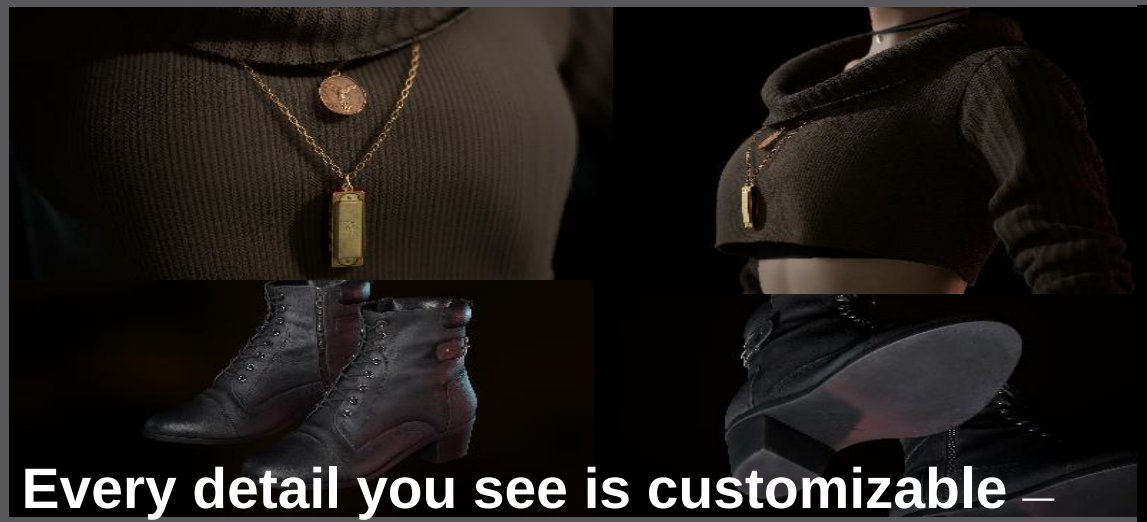
Introduction

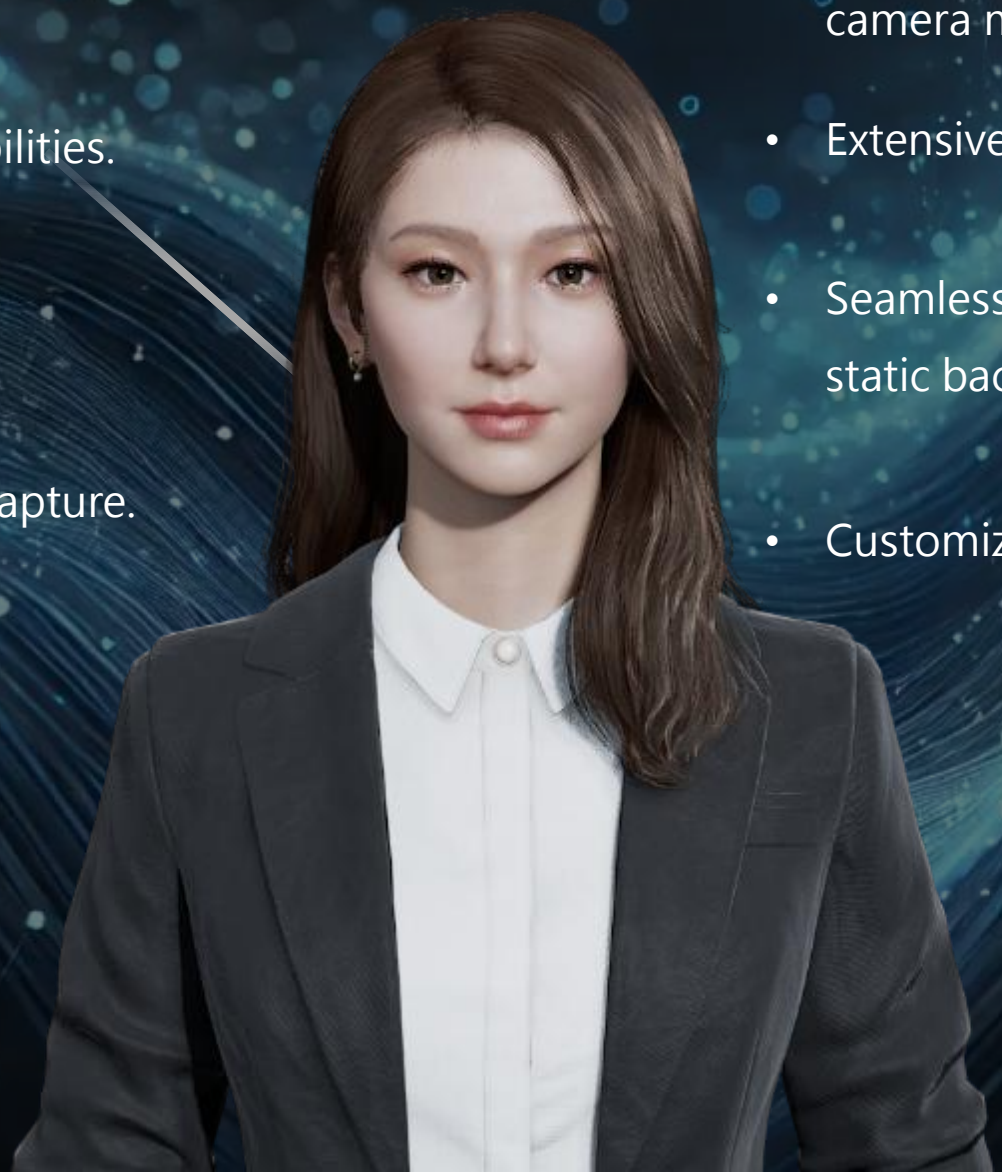
The Virtual Human Engine for AI Expression – Momentum Cloud is a cloud-based engine purpose-built for digital human interaction. It combines real-time rendering, voice-driven performance, expressive animations, and modular outfit control to bring virtual characters to life. By integrating with mainstream TTS, LLMs, chatbots, and AI platforms, Momentum Cloud acts as the expressive front-end layer—visualizing AI responses with motion, personality, and emotion.

Supporting VRM and MetaHuman formats, the platform enables easy character import, brand customization, lipsync animation, and video/streaming output. It is ideal for scenarios such as customer support, training, digital events, and marketing campaigns. As an engine—empowers developers and creators to give AI a visible, relatable face, and bridge the gap between intelligence and human interaction.



Every detail you see is customizable –
from hair color, eye design, and ear shape, to clothing, accessories, eyewear, and even footwear. Our virtual human creation process supports a fully modular, open-ended system that adapts to any creative vision or brand identity.
Nothing is off-limits.

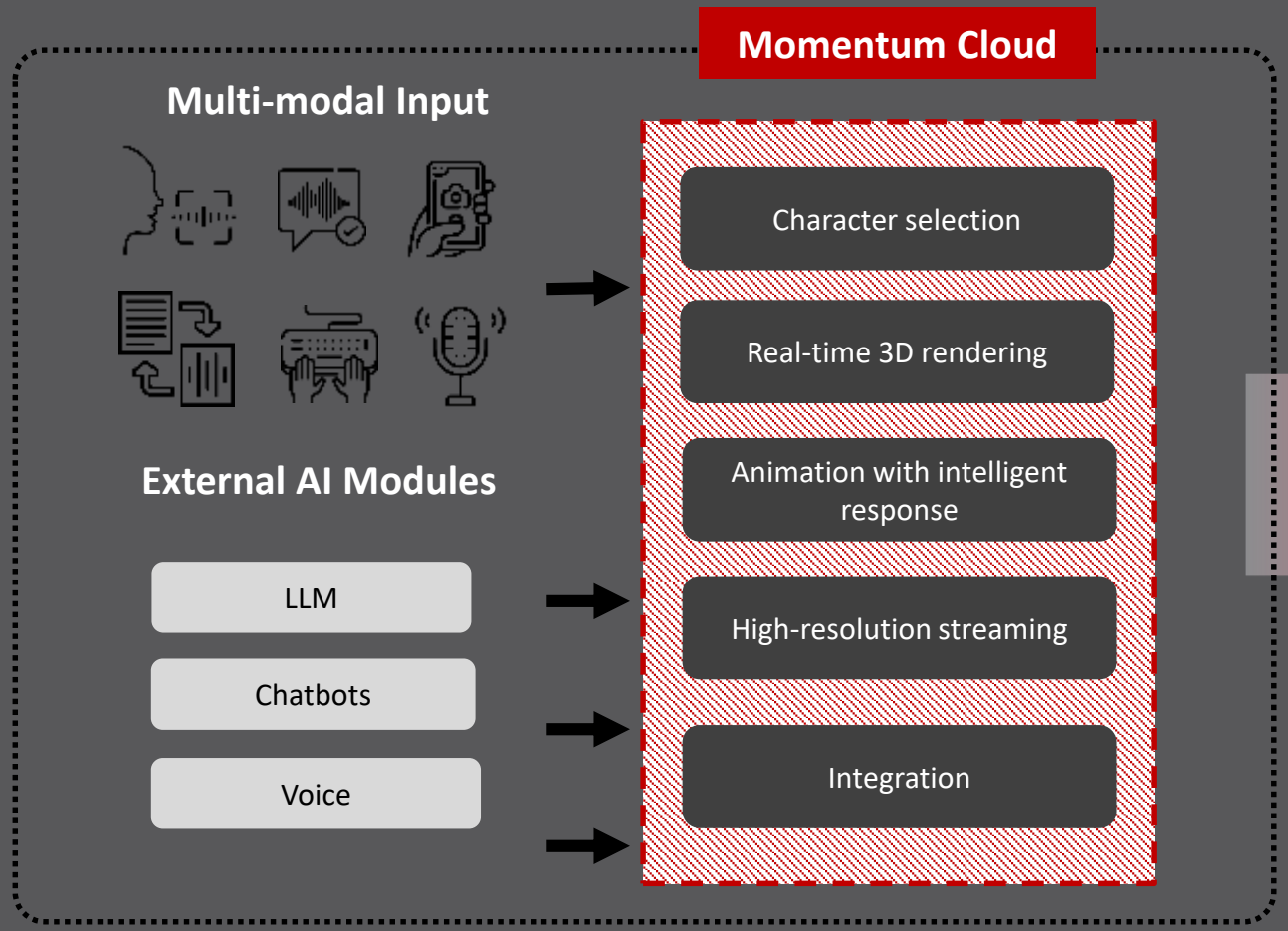
- Vast styling and color customization library.
- Real-time and pre-record capabilities.
- Varieties of lighting effects.
- Open integration with motion capture.



- Unrestricted movement, scaling, and camera manipulation.
- Extensive expressions and motions library.
- Seamless integration with dynamic and static backgrounds.
- Customization available upon request.

From Selection to Deployment

Momentum Cloud focuses on expressive delivery—facial expression, gesture, visual embodiment—while AI services handle semantic processing and response generation. The modularity allows clients to bring their own brain while relying on us for the face.

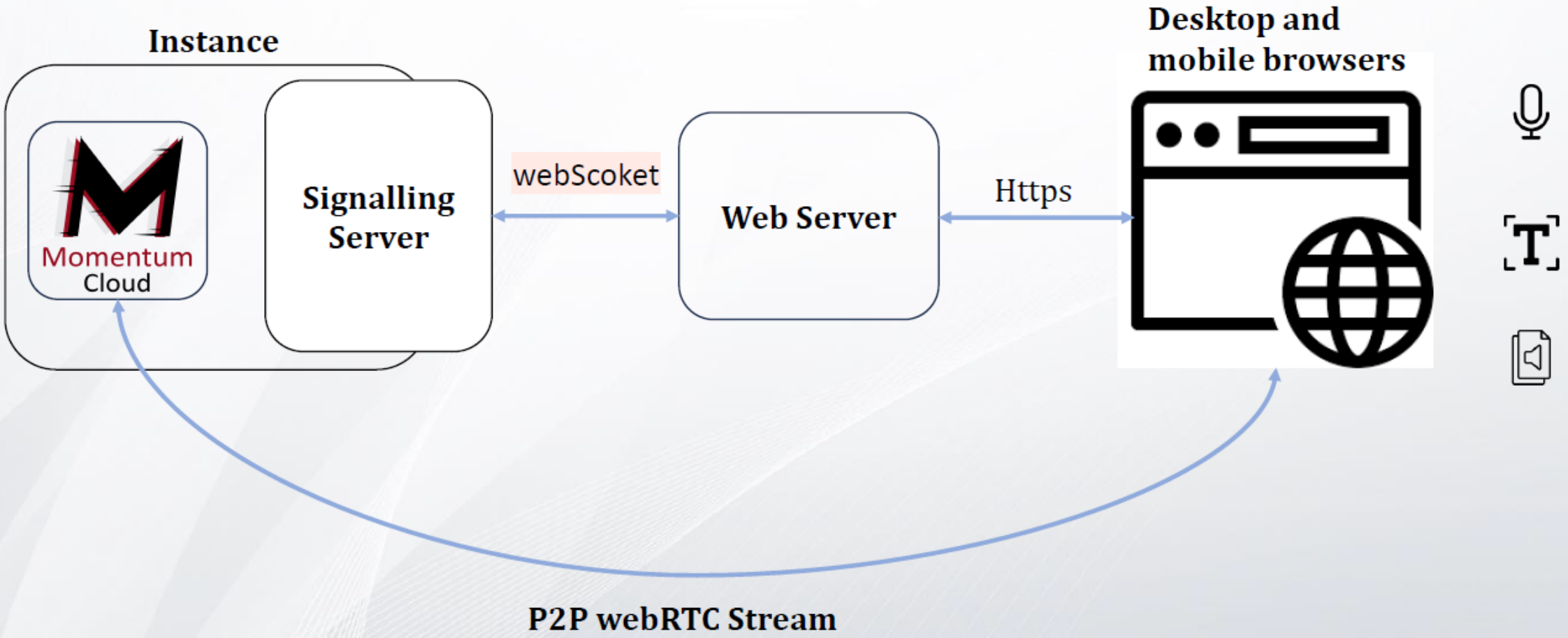


Add Virtual Humans as the 'Interface' for AI

AI Virtual Human Solutions

Momentum Cloud bridges AI intelligence and human-like interaction—bringing your virtual agents to life across any device, any industry.

Solution Framework



Hardware Requirement

MomentumCloud Server Z			
on-premise		Cloud	
CPU	16 Cores	AWS	g4dn.4xlarge
RAM	32GB	Azure	Standard_NV36ads_A10_v5
GPU	RTX 3080	GCP	g2-standard-16
Storage	SSD,At least 20GB of free space is needed for the Momentum Cloud system.	other cloud providers	Instances on other cloud providers are also acceptable as long as they have GPUs with A10, T4, or L4 models.
Network	Minimum 100Mbps upload and download speed required for both cloud and on-premise setups.		
OS	Windows 10 or Windows 11 Home or Professional editions are acceptable.		

Client Spec (KIOSK)	
CPU	4 Cores or above
RAM	8GB
Browser	Chrome、Edge
OS	Windows
Network	Minimum 100Mbps upload and download speed required

GPU Comparison: https://www.videocardbenchmark.net/high_end_gpus.html

Digital Human x Apple Mac Studio

Mac Studio is a powerhouse for AI, capable of running large language models (LLMs) with over 600 billion parameters entirely in memory, thanks to its advanced GPU and up to 512GB of unified memory with M3 Ultra

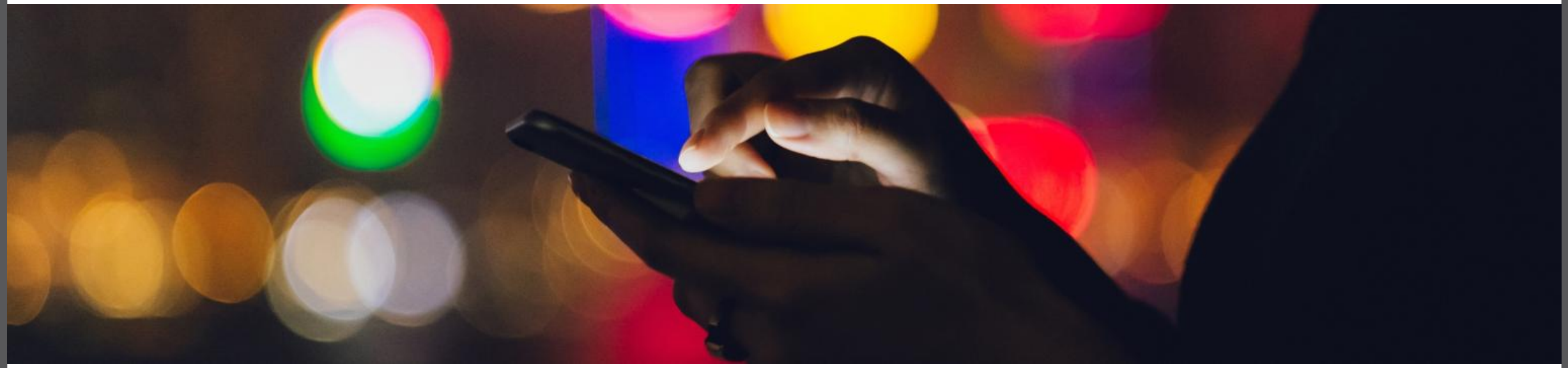
Mac Studio with M3 Ultra enables:

- Up to 16.9x faster token generation using an LLM with hundreds of billions of parameters in LM Studio
- Up to 2.6x faster scene rendering performance in Maxon Redshift.
- Up to 1.1x faster basecalling for DNA sequencing in Oxford Nanopore MinKNOW

Requirements for Trial

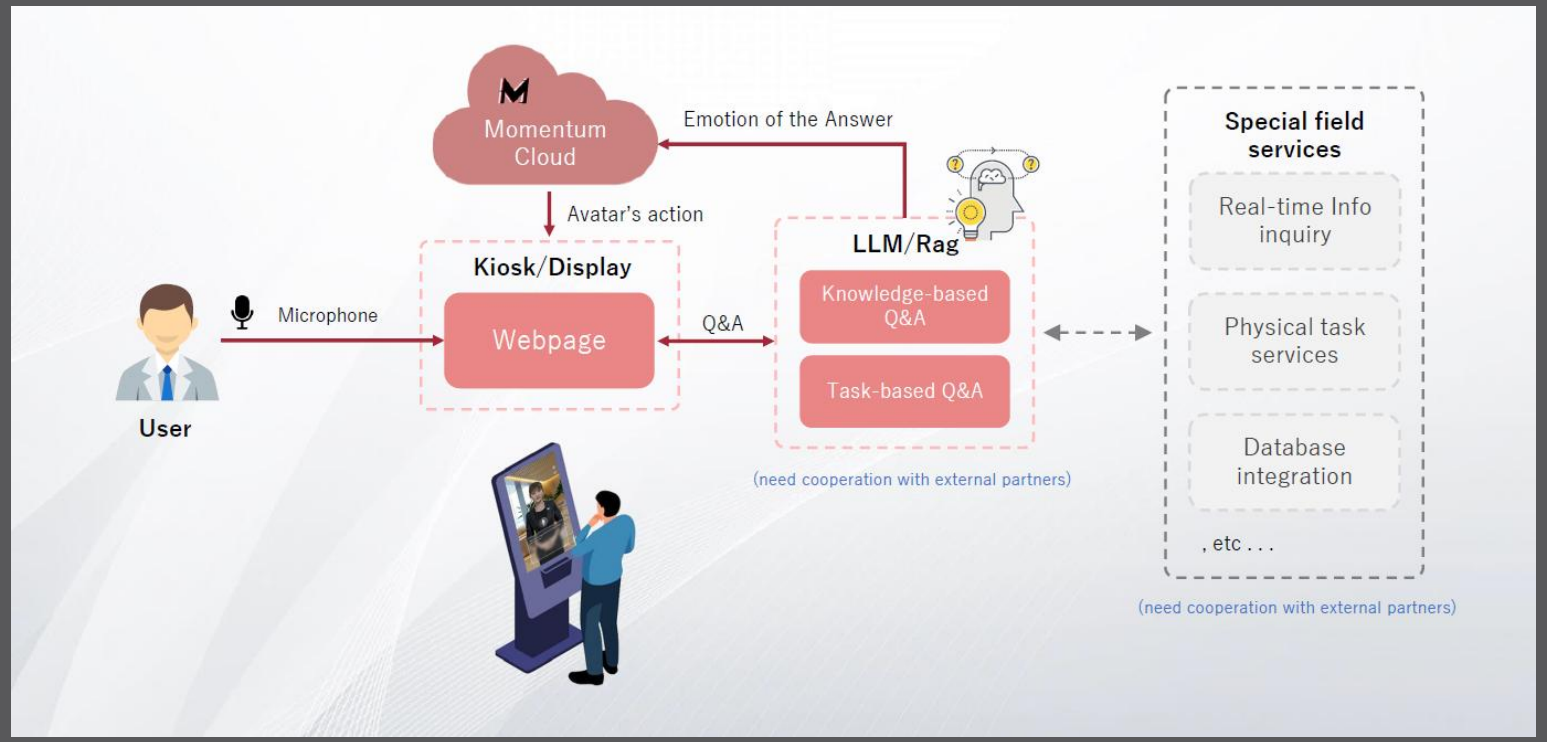
Please prepare a computer and ensure that the internet connection is stable.

- The computer must have a web browser installed. It is recommended to use Google Chrome (version v125.0.6422.601.61 and above).
- To ensure a stable internet connection, please use a wired network (Wi-Fi is not recommended) and make sure the bandwidth can be maintained at least 100 Mbps for download and 40 Mbps for upload. **(500M/50M in HK)**
- Some companies may have specific security policies. If you are using the company network, please ensure with IT that the following network ports are open: TCP 80, 443, 8888, 19303, and UDP 19303 (TCP 11111 for ARKit and 39539 for VMC if needed).

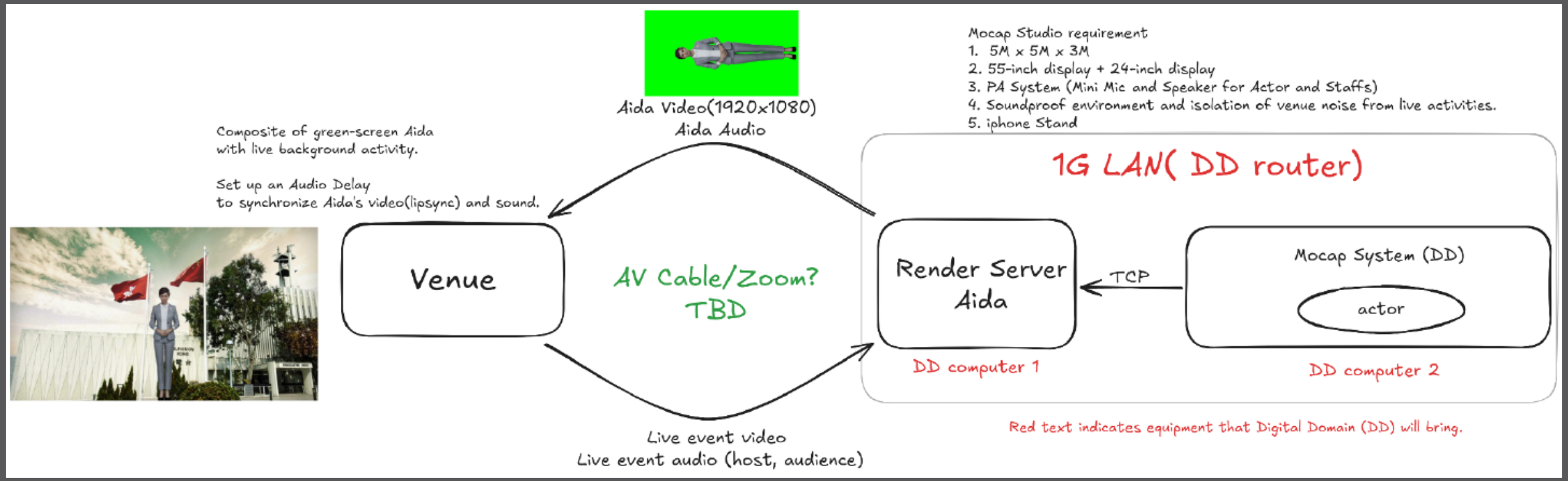


Customer Use Case

Common Usage – Integration with conversational AI



Common Usage – Live Show with mocap

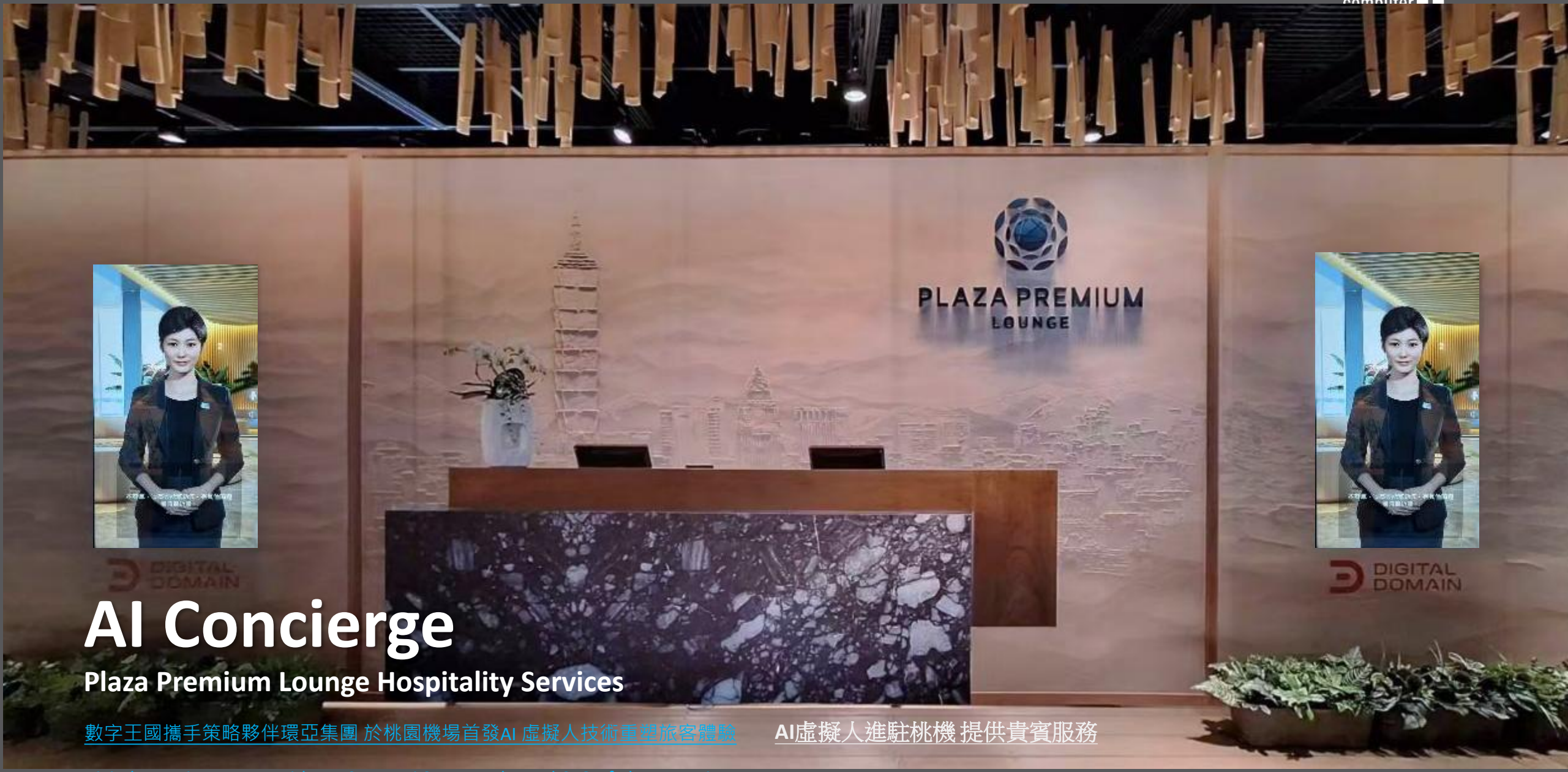


Common Usage – Live Show with mocap

Common Usage – Video Production

News Broadcast / Weekly Highlights

Education / Training



AI Concierge

Plaza Premium Lounge Hospitality Services

數字王國攜手策略夥伴環亞集團 於桃園機場首發AI 虛擬人技術重塑旅客體驗

AI虛擬人進駐桃機 提供貴賓服務

Digital Domain Partners with Mr. Song Hoi See Founder and CEO of Plaza Premium Group to Launch "Digital Human Hospitality Services"

AI Virtual Mixologist

Smart Retail Meets Personalized Drink Service

Discover More. Demo Video

/ 2025 Key Success Case

Virtual Teresa Teng live performance

Proposed Ideas for the HKSAR Government

1. Multilingual Self-service Kiosks

- Provide instant assistance to citizens particularly for ethnic minorities
- Streamline workflow and reduce burdens to existing staff
- Collect compliant and feedback from users

Current project: Police Force (in progress)
Proposed department: Housing Authorities, Home Affairs Department, Public Library etc.

2. Role-play Training with virtual human

- Conduct role-play simulations in various scenarios to enhance citizens' inclusiveness to the society

Proposed department: Labor Department, Social Welfare Department, etc.

3. Mental support and counselling

- Provide instant assistance to citizens with our anonymous virtual human
- Reduce burden of front-line staff

Proposed department: Hospital Authorities, Education Bureau, Social Welfare Department, etc

4. Live performance and exhibition

- Provide live interaction with virtual human to enhance audience's engagement
- Optimize human resource by use of Virtual Human for repetitive work

Current project: RTHK (in progress)
Proposed department: DOJ 國際調解院總部, InvestHK, OASES, Tourism Board, etc.

Thank You
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